Abstract

An apparatus for injecting fluid substances into eggs is disclosed, comprising a plurality of injectors, needles disposed within each of the injectors moveable between a retracted position and an extended injecting position with respect to the injectors, and a bridge assembly for positioning the injectors in alignment with a corresponding plurality of eggs in an egg flat. The injectors rest substantially vertically in openings in a horizontal plate. The openings in the plate are slightly larger than the cross-section of the injectors for permitting the injectors to move vertically within the openings in the plate with respect to the plate. An egg nesting cup is pivotally secured to the lower end of each injector. The injectors are lowered to engage the eggs. When the plate and the injectors are lowered the nesting cups seat against the eggs and the injectors move vertically upward with respect to the plate. A second plate adjacent and moveable relative to the first plate, having openings corresponding to the openings in the first plate, secures the injectors in place on the eggs. The needles then advance into the eggs. The relationship defined, by the seated position of the articulating cup against the shell of an egg and the injecting position of the needle is consistently reproducible so that the penetration and injection location of the needle within an egg is consistent regardless of the size and orientation of the egg. A needle for use in the injectors includes a beveled, solid tip and a radial opening adjacent the tip for both penetration of the egg shell and delivery of fluid. A fluid delivery assembly gently pulses fluid substance through the needles and into the eggs.